[PubMed](#)[Nucleotide](#)[Protein](#)[Genome](#)[Structure](#)[PopSet](#)[Taxonomy](#)[OMIM](#)[Books](#)Search for [Limits](#)[Preview/Index](#)[History](#)[Clipboard](#)[Details](#)[About Entrez](#)

Text Version

Show:

Items 1-11 of 11

One page.

Entrez PubMed

[Overview](#)[Help | FAQ](#)[Tutorial](#)[New/Noteworthy](#)[E-Utilities](#)

PubMed Services

[Journal Browser](#)[MeSH Browser](#)[Single Citation Matcher](#)[Batch Citation Matcher](#)[Clinical Queries](#)[LinkOut](#)[Cubby](#)

Related Resources

[Order Documents](#)[NLM Gateway](#)[TOXNET](#)[Consumer Health](#)[Clinical Alerts](#)[ClinicalTrials.gov](#)[PubMed Central](#)[Privacy Policy](#)

- ☐
- 1:
- [Mauldin SK, Getts RC, Liu W, Stamato TD.](#)

[Related Articles](#), [NEW](#) [Links](#)

DNA-PK-dependent binding of DNA ends to plasmids containing nuclear matrix attachment region DNA sequences: evidence for assembly of a repair complex.

Nucleic Acids Res. 2002 Sep 15;30(18):4075-87.

PMID: 12235392 [PubMed - in process]

- ☐
- 2:
- [Huang J, Dynan WS.](#)

[Related Articles](#), [NEW](#) [Links](#)

Reconstitution of the mammalian DNA double-strand break end-joining reaction reveals a requirement for an Mre11/Rad50/NBS1-containing fraction.

Nucleic Acids Res. 2002 Feb 1;30(3):667-74.

PMID: 11809878 [PubMed - indexed for MEDLINE]

- ☐
- 3:
- [d'Adda di Fagagna F, Hande MP, Tong WM, Roth D, Lansdorp PM, Wang ZQ, Jackson SP.](#)

[Related Articles](#), [NEW](#) [Links](#)

Effects of DNA nonhomologous end-joining factors on telomere length and chromosomal stability in mammalian cells.

Curr Biol. 2001 Aug 7;11(15):1192-6.

PMID: 11516951 [PubMed - indexed for MEDLINE]

- ☐
- 4:
- [Wang H, Zeng ZC, Perrault AR, Cheng X, Qin W, Iliakis G.](#)

[Related Articles](#), [NEW](#) [Links](#)

Genetic evidence for the involvement of DNA ligase IV in the DNA-PK-dependent pathway of non-homologous end joining in mammalian cells.

Nucleic Acids Res. 2001 Apr 15;29(8):1653-60.

PMID: 11292837 [PubMed - indexed for MEDLINE]

- ☐
- 5:
- [Samper E, Goytisolo FA, Slijepcevic P, van Buul PP, Blasco MA.](#)

[Related Articles](#), [NEW](#) [Links](#)

Mammalian Ku86 protein prevents telomeric fusions independently of the length of TTAGGG repeats and the G-strand overhang.

EMBO Rep. 2000 Sep;1(3):244-52.

PMID: 11256607 [PubMed - indexed for MEDLINE]

- ☐
- 6:
- [Manolis KG, Nimmo ER, Hartsuiker E, Carr AM, Jeggo PA, Allshire RC.](#)

[Related Articles](#), [NEW](#) [Links](#)

Novel functional requirements for non-homologous DNA end joining in *Schizosaccharomyces pombe*.

EMBO J. 2001 Jan 15;20(1-2):210-21.

PMID: 11226171 [PubMed - indexed for MEDLINE]

- ☐
- 7:
- [Chen L, Trujillo K, Sung P, Tomkinson AE.](#)

[Related Articles](#), [NEW](#) [Links](#)

Interactions of the DNA ligase IV-XRCC4 complex with DNA ends and the DNA-dependent protein kinase.

J Biol Chem. 2000 Aug 25;275(34):26196-205.

PMID: 10854421 [PubMed - indexed for MEDLINE]

- ☐
- 8:
- [Gu Y, Sekiguchi J, Gao Y, Dikkes P, Frank K, Ferguson D, Hasty P, Chun J, Alt FW.](#)

[Related Articles](#), [NEW](#) [Links](#)

Defective embryonic neurogenesis in Ku-deficient but not DNA-dependent protein

kinase catalytic subunit-deficient mice.
Proc Natl Acad Sci U S A. 2000 Mar 14;97(6):2668-73.
PMID: 10716994 [PubMed - indexed for MEDLINE]

- ☐ 9: [Yang CR, Yeh S, Leskov K, Odegaard E, Hsu HL, Chang C, Kinsella TJ, Chen DJ, Boothman DA](#), Related Articles, [NEW](#) Links

Isolation of Ku70-binding proteins (KUBs).
Nucleic Acids Res. 1999 May 15;27(10):2165-74.
PMID: 10219089 [PubMed - indexed for MEDLINE]

- ☐ 10: [Baumann P, West SC](#), Related Articles, [NEW](#) Links

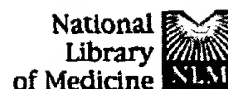
DNA end-joining catalyzed by human cell-free extracts.
Proc Natl Acad Sci U S A. 1998 Nov 24;95(24):14066-70.
PMID: 9826654 [PubMed - indexed for MEDLINE]

- ☐ 11: [Frank KM, Sekiguchi JM, Seidl KJ, Swat W, Rathbun GA, Cheng HL, Davidson L, Kangaloo L, Alt FW](#), Related Articles, [NEW](#) Links

Late embryonic lethality and impaired V(D)J recombination in mice lacking DNA ligase IV.
Nature. 1998 Nov 12;396(6707):173-7.
PMID: 9823897 [PubMed - indexed for MEDLINE]

Display	Summary	▼	Sort	▼	Save	Text	Clip Add	Order
Show:	20	▼	Items 1-11 of 11			One page.		

[Write to the Help Desk](#)
[NCBI](#) | [NLM](#) | [NIH](#)
[Department of Health & Human Services](#)
[Freedom of Information Act](#) | [Disclaimer](#)

[PubMed](#)[Nucleotide](#)[Protein](#)[Genome](#)[Structure](#)[PopSet](#)[Taxonomy](#)[OMIM](#)[Books](#)

Search

PubMed

for

Go

Clear

[Limits](#)[Preview/Index](#)[History](#)[Clipboard](#)[Details](#)[About Entrez](#)

Display

Abstract

Sort

Save

Text

Clip Add

Order

Text Version

Entrez PubMed

[Overview](#)[Help | FAQ](#)[Tutorial](#)[New/Noteworthy](#)[E-Utilities](#)

PubMed Services

[Journal Browser](#)[MeSH Browser](#)[Single Citation Matcher](#)[Batch Citation Matcher](#)[Clinical Queries](#)[LinkOut](#)[Cubby](#)

Related Resources

[Order Documents](#)[NLM Gateway](#)[TOXNET](#)[Consumer Health](#)[Clinical Alerts](#)[ClinicalTrials.gov](#)[PubMed Central](#)[Privacy Policy](#)☐ 1: Nucleic Acids Res 2002 Sep 15;30(18):4075-87[Related Articles](#), [NEW](#) [Links](#)Full text article at
nar.oupjournals.org

DNA-PK-dependent binding of DNA ends to plasmids containing nuclear matrix attachment region DNA sequences: evidence for assembly of a repair complex.

Mauldin SK, Getts RC, Liu W, Stamato TD.

Lankenau Institute for Medical Research, 100 Lancaster Avenue, Wynnwood, PA 19096, USA and Genisphere, Incorporated, 4170 City Avenue, Philadelphia, PA 19131-1694, USA.

We find that nuclear protein extracts from mammalian cells contain an activity that allows DNA ends to associate with circular pUC18 plasmid DNA. This activity requires the catalytic subunit of DNA-PK (DNA-PKcs) and Ku since it was not observed in mutants lacking Ku or DNA-PKcs but was observed when purified Ku/DNA-PKcs was added to these mutant extracts. Purified Ku/DNA-PKcs alone did not produce association of DNA ends with plasmid DNA suggesting that additional factors in the nuclear extract are necessary for this activity. Competition experiments between pUC18 and pUC18 plasmids containing various nuclear matrix attachment region (MAR) sequences suggest that DNA ends preferentially associate with plasmids containing MAR DNA sequences. At a 1:5 mass ratio of MAR to pUC18, approximately equal amounts of DNA end binding to the two plasmids were observed, while at a 1:1 ratio no pUC18 end binding was observed. Calculation of relative binding activities indicates that DNA end-binding activities to MAR sequences was 7-21-fold higher than pUC18. Western analysis of proteins bound to pUC18 and MAR plasmids indicates that XRCC4, DNA ligase IV and scaffold attachment factor A preferentially associate with the MAR plasmid in the absence or presence of DNA ends. In contrast, Ku and DNA-PKcs were found on the MAR plasmid only in the presence of DNA ends suggesting that binding of these proteins to DNA ends is necessary for their association with MAR DNA. The ability of DNA-PKcs/Ku to direct DNA ends to MAR and pUC18 plasmid DNA is a new activity for DNA-PK and may be important for its function in double-strand break repair. A model for DNA repair based on these observations is presented.

PMID: 12235392 [PubMed - in process]

Display

Abstract

Sort

Save

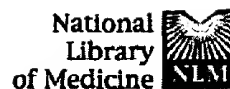
Text

Clip Add

Order

[Write to the Help Desk](#)[NCBI](#) | [NLM](#) | [NIH](#)

Department of Health & Human Services

[PubMed](#)[Nucleotide](#)[Protein](#)[Genome](#)[Structure](#)[PopSet](#)[Taxonomy](#)[OMIM](#)[Books](#)

Search

PubMed

for

Go

Clear

☒ Limits[Preview/Index](#)[History](#)[Clipboard](#)[Details](#)[About Entrez](#)

Display

Abstract

Sort

Save

Text

Clip Add

Order

Text Version

Entrez PubMed

[Overview](#)[Help | FAQ](#)[Tutorial](#)[New/Noteworthy](#)[E-Utilities](#)

PubMed Services

[Journal Browser](#)[MeSH Browser](#)[Single Citation Matcher](#)[Batch Citation Matcher](#)[Clinical Queries](#)[LinkOut](#)[Cubby](#)

Related Resources

[Order Documents](#)[NLM Gateway](#)[TOXNET](#)[Consumer Health](#)[Clinical Alerts](#)[ClinicalTrials.gov](#)[PubMed Central](#)[Privacy Policy](#)☐ 1: Curr Opin Genet Dev 1997 Feb;7(1):99-104[Related Articles](#), [NEW Links](#)

Tying loose ends: roles of Ku and DNA-dependent protein kinase in the repair of double-strand breaks.

Lieber MR, Grawunder U, Wu X, Yaneva M.

Division of Molecular Oncology, Departments of Pathology, Biochemistry and Molecular Biophysics, Campus Box 8118, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, Missouri 63110, USA.
lieber@pathology.wustl.edu

A convergence of information from biochemistry, yeast and mammalian genetics, immunology, and radiation biology has permitted identification of some of the protein participants - Ku, DNA-PK, XRCC4 - and the reaction intermediates in DNA end joining, suggesting how broken chromosomal ends may be recognized and repaired in eukaryotic cells. Some components may be defective in inherited disorders.

Publication Types:

- Review
- Review, Tutorial

PMID: 9024627 [PubMed - indexed for MEDLINE]

Display

Abstract

Sort

Save

Text

Clip Add

Order

[Write to the Help Desk](#)[NCBI | NLM | NIH](#)[Department of Health & Human Services](#)[Freedom of Information Act | Disclaimer](#)

Search for

Limits Preview/Index History Clipboard Details

About Entrez

Text Version

Show: Items 1-20 of 101 Page 1 of 6 Select page: 1 2 3 4 5 6

Entrez PubMed

Overview
Help | FAQ
Tutorial
New/Noteworthy
E-Utilities

PubMed Services

Journal Browser
MeSH Browser
Single Citation Matcher
Batch Citation Matcher
Clinical Queries
LinkOut
Cubby

Related Resources

Order Documents
NLM Gateway
TOXNET
Consumer Health
Clinical Alerts
ClinicalTrials.gov
PubMed Central

Privacy Policy

- ☐ 1: [Mauldin SK, Getts RC, Liu W, Stamato TD.](#) [Related Articles](#), [NEW](#) [Links](#)

DNA-PK-dependent binding of DNA ends to plasmids containing nuclear matrix attachment region DNA sequences: evidence for assembly of a repair complex.
Nucleic Acids Res. 2002 Sep 15;30(18):4075-87.
PMID: 12235392 [PubMed - in process]

- ☐ 2: [Chen L, Trujillo K, Sung P, Tomkinson AE.](#) [Related Articles](#), [NEW](#) [Links](#)

Interactions of the DNA ligase IV-XRCC4 complex with DNA ends and the DNA-dependent protein kinase.
J Biol Chem. 2000 Aug 25;275(34):26196-205.
PMID: 10854421 [PubMed - indexed for MEDLINE]

- ☐ 3: [Ting NS, Chan DW, Lintott LG, Allalunis-Turner J, Lees-Miller SP.](#) [Related Articles](#), [NEW](#) [Links](#)

Protein-DNA complexes containing DNA-dependent protein kinase in crude extracts from human and rodent cells.
Radiat Res. 1999 Apr;151(4):414-22.
PMID: 10190493 [PubMed - indexed for MEDLINE]

- ☐ 4: [Lee SH, Kim CH.](#) [Related Articles](#), [NEW](#) [Links](#)

DNA-dependent protein kinase complex: a multifunctional protein in DNA repair and damage checkpoint.
Mol Cells. 2002 Apr 30;13(2):159-66.
PMID: 12018836 [PubMed - in process]

- ☐ 5: [Blier PR, Griffith AJ, Craft J, Hardin JA.](#) [Related Articles](#), [NEW](#) [Links](#)

Binding of Ku protein to DNA. Measurement of affinity for ends and demonstration of binding to nicks.
J Biol Chem. 1993 Apr 5;268(10):7594-601.
PMID: 8463290 [PubMed - indexed for MEDLINE]

- ☐ 6: [Yumoto Y, Shirakawa H, Yoshida M, Suwa A, Watanabe F, Teraoka H.](#) [Related Articles](#), [NEW](#) [Links](#)

High mobility group proteins 1 and 2 can function as DNA-binding regulatory components for DNA-dependent protein kinase in vitro.
J Biochem (Tokyo). 1998 Sep;124(3):519-27.
PMID: 9722660 [PubMed - indexed for MEDLINE]

- ☐ 7: [Chan DW, Lees-Miller SP.](#) [Related Articles](#), [NEW](#) [Links](#)

The DNA-dependent protein kinase is inactivated by autophosphorylation of the catalytic subunit.
J Biol Chem. 1996 Apr 12;271(15):8936-41.
PMID: 8621537 [PubMed - indexed for MEDLINE]

- ☐ 8: [Nick McElhinny SA, Snowden CM, McCarville J, Ramsden DA.](#) [Related Articles](#), [NEW](#) [Links](#)

Ku recruits the XRCC4-ligase IV complex to DNA ends.
Mol Cell Biol. 2000 May;20(9):2996-3003.
PMID: 10757784 [PubMed - indexed for MEDLINE]

- ☐ **9:** [Li B, Comai L.](#) Related Articles, [NEW](#) Links
Displacement of DNA-PKcs from DNA ends by the Werner syndrome protein.
Nucleic Acids Res. 2002 Sep 1;30(17):3653-61.
PMID: 12202749 [PubMed - in process]
- ☐ **10:** [Frit P, Li RY, Arzel D, Salles B, Calsou P.](#) Related Articles, [NEW](#) Links
Ku entry into DNA inhibits inward DNA transactions in vitro.
J Biol Chem. 2000 Nov 17;275(46):35684-91.
PMID: 10945984 [PubMed - indexed for MEDLINE]
- ☐ **11:** [Finnie NJ, Gottlieb TM, Blunt T, Jeggo PA, Jackson SP.](#) Related Articles, [NEW](#) Links
DNA-dependent protein kinase defects are linked to deficiencies in DNA repair and V(D)J recombination.
Philos Trans R Soc Lond B Biol Sci. 1996 Feb 29;351(1336):173-9. Review.
PMID: 8650264 [PubMed - indexed for MEDLINE]
- ☐ **12:** [Calsou P, Frit P, Humbert O, Muller C, Chen DJ, Salles B.](#) Related Articles, [NEW](#) Links
The DNA-dependent protein kinase catalytic activity regulates DNA end processing by means of Ku entry into DNA.
J Biol Chem. 1999 Mar 19;274(12):7848-56.
PMID: 10075677 [PubMed - indexed for MEDLINE]
- ☐ **13:** [Tsutsui K, Tsutsui K, Okada S, Watarai S, Seki S, Yasuda T, Shohmori T.](#) Related Articles, [NEW](#) Links
Identification and characterization of a nuclear scaffold protein that binds the matrix attachment region DNA.
J Biol Chem. 1993 Jun 15;268(17):12886-94.
PMID: 8509422 [PubMed - indexed for MEDLINE]
- ☐ **14:** [Hammarsten O, Chu G.](#) Related Articles, [NEW](#) Links
DNA-dependent protein kinase: DNA binding and activation in the absence of Ku.
Proc Natl Acad Sci U S A. 1998 Jan 20;95(2):525-30.
PMID: 9435225 [PubMed - indexed for MEDLINE]
- ☐ **15:** [Yoo S, Dynan WS.](#) Related Articles, [NEW](#) Links
Geometry of a complex formed by double strand break repair proteins at a single DNA end: recruitment of DNA-PKcs induces inward translocation of Ku protein.
Nucleic Acids Res. 1999 Dec 15;27(24):4679-86.
PMID: 10572166 [PubMed - indexed for MEDLINE]
- ☐ **16:** [Lundberg R, Mavinakere M, Campbell C.](#) Related Articles, [NEW](#) Links
Deficient DNA end joining activity in extracts from fanconi anemia fibroblasts.
J Biol Chem. 2001 Mar 23;276(12):9543-9.
PMID: 11124945 [PubMed - indexed for MEDLINE]
- ☐ **17:** [Chan DW, Chen BP, Prithivirajasingh S, Kurimasa A, Story MD, Qin J, Chen DJ.](#) Related Articles, [NEW](#) Links
Autophosphorylation of the DNA-dependent protein kinase catalytic subunit is required for rejoining of DNA double-strand breaks.
Genes Dev. 2002 Sep 15;16(18):2333-8.
PMID: 12231622 [PubMed - in process]
- ☐ **18:** [Pang D, Yoo S, Dynan WS, Jung M, Dritschilo A.](#) Related Articles, [NEW](#) Links
Ku proteins join DNA fragments as shown by atomic force microscopy.
Cancer Res. 1997 Apr 15;57(8):1412-5.
PMID: 9108436 [PubMed - indexed for MEDLINE]
- ☐ **19:** [Getts RC, Stamato TD.](#) Related Articles, [NEW](#) Links
Absence of a Ku-like DNA end binding activity in the xrs double-strand DNA

repair-deficient mutant.

J Biol Chem. 1994 Jun 10;269(23):15981-4.

PMID: 8206892 [PubMed - indexed for MEDLINE]

☐ 20: [Martensson S, Hammarsten O.](#)

[Related Articles](#), [NEW](#) [Links](#)

DNA-dependent protein kinase catalytic subunit. Structural requirements for kinase activation by DNA ends.

J Biol Chem. 2002 Jan 25;277(4):3020-9.

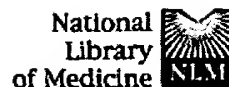
PMID: 11700303 [PubMed - indexed for MEDLINE]

Display	Summary	▼	Sort	▼	Save	Text	Clip Add	Order
---------	---------	---	------	---	------	------	----------	-------

Show: ▼ Items 1-20 of 101 Page 1 of 6 Select page: [1](#) [2](#) [3](#) [4](#) [5](#) [6](#)

[Write to the Help Desk](#)
[NCBI](#) | [NLM](#) | [NIH](#)
[Department of Health & Human Services](#)
[Freedom of Information Act](#) | [Disclaimer](#)

i686-pc-linux-gnu Aug 30 2002 15:17:13

[PubMed](#)[Nucleotide](#)[Protein](#)[Genome](#)[Structure](#)[PopSet](#)[Taxonomy](#)[OMIM](#)[Books](#)

Search

PubMed

for

Go

Clear

[Limits](#)[Preview/Index](#)[History](#)[Clipboard](#)[Details](#)[About Entrez](#)

Display

Summary

Sort

Save

Text

Clip Add

Order

Text Version

Show: 20

Items 21-40 of 101

Page 2 of 6

Select page: 1 2 3 4 5 6

Entrez PubMed

[Overview](#)[Help | FAQ](#)[Tutorial](#)[New/Noteworthy](#)[E-Utilities](#)

PubMed Services

[Journal Browser](#)[MeSH Browser](#)[Single Citation Matcher](#)[Batch Citation Matcher](#)[Clinical Queries](#)[LinkOut](#)[Cubby](#)

Related Resources

[Order Documents](#)[NLM Gateway](#)[TOXNET](#)[Consumer Health](#)[Clinical Alerts](#)[ClinicalTrials.gov](#)[PubMed Central](#)[Privacy Policy](#)

- ☐ **21:** [Chiu CY, Cary RB, Chen DJ, Peterson SR, Stewart PL.](#)

[Related Articles](#), [NEW](#) [Links](#)

Cryo-EM imaging of the catalytic subunit of the DNA-dependent protein kinase.

J Mol Biol. 1998 Dec 11;284(4):1075-81.

PMID: 9837727 [PubMed - indexed for MEDLINE]

- ☐ **22:** [Han Z, Johnston C, Reeves WH, Carter T, Wyche JH, Hendrickson EA.](#)

[Related Articles](#), [NEW](#) [Links](#)

Characterization of a Ku86 variant protein that results in altered DNA binding and diminished DNA-dependent protein kinase activity.

J Biol Chem. 1996 Jun 14;271(24):14098-104.

PMID: 8662896 [PubMed - indexed for MEDLINE]

- ☐ **23:** [Calsou P, Frit P, Salles B.](#)

[Related Articles](#), [NEW](#) [Links](#)

Double strand breaks in DNA inhibit nucleotide excision repair in vitro.

J Biol Chem. 1996 Nov 1;271(44):27601-7.

PMID: 8910348 [PubMed - indexed for MEDLINE]

- ☐ **24:** [Ting NS, Kao PN, Chan DW, Lintott LG, Lees-Miller SP.](#)

[Related Articles](#), [NEW](#) [Links](#)

DNA-dependent protein kinase interacts with antigen receptor response element binding proteins NF90 and NF45.

J Biol Chem. 1998 Jan 23;273(4):2136-45.

PMID: 9442054 [PubMed - indexed for MEDLINE]

- ☐ **25:** [Finnie NJ, Gottlieb TM, Blunt T, Jeggo PA, Jackson SP.](#)

[Related Articles](#), [NEW](#) [Links](#)

DNA-dependent protein kinase activity is absent in xrs-6 cells: implications for site-specific recombination and DNA double-strand break repair.

Proc Natl Acad Sci U S A. 1995 Jan 3;92(1):320-4.

PMID: 7816841 [PubMed - indexed for MEDLINE]

- ☐ **26:** [Frit P, Calsou P, Chen DJ, Salles B.](#)

[Related Articles](#), [NEW](#) [Links](#)

Ku70/Ku80 protein complex inhibits the binding of nucleotide excision repair proteins on linear DNA in vitro.

J Mol Biol. 1998 Dec 11;284(4):963-73.

PMID: 9837719 [PubMed - indexed for MEDLINE]

- ☐ **27:** [Woodard RL, Lee KJ, Huang J, Dynan WS.](#)

[Related Articles](#), [NEW](#) [Links](#)

Distinct roles for Ku protein in transcriptional reinitiation and DNA repair.

J Biol Chem. 2001 May 4;276(18):15423-33.

PMID: 11278739 [PubMed - indexed for MEDLINE]

- ☐ **28:** [Suwa A, Hirakata M, Takeda Y, Jesch SA, Mimori T, Hardin JA.](#)

[Related Articles](#), [NEW](#) [Links](#)

DNA-dependent protein kinase (Ku protein-p350 complex) assembles on double-stranded DNA.

Proc Natl Acad Sci U S A. 1994 Jul 19;91(15):6904-8.

PMID: 8041718 [PubMed - indexed for MEDLINE]

- ☐ **29:** [Cary RB, Peterson SR, Wang J, Bear DG, Bradbury EM, Chen DJ.](#)

[Related Articles](#), [NEW](#) [Links](#)

DNA looping by Ku and the DNA-dependent protein kinase.
Proc Natl Acad Sci U S A. 1997 Apr 29;94(9):4267-72.
PMID: 9113978 [PubMed - indexed for MEDLINE]

- ☐ **30:** Rodgers W, Jordan SJ, Capra JD. Related Articles, [NEW](#) Links
Transient association of Ku with nuclear substrates characterized using fluorescence photobleaching.
J Immunol. 2002 Mar 1;168(5):2348-55.
PMID: 11859125 [PubMed - indexed for MEDLINE]
- ☐ **31:** Vispe S, Satoh MS. Related Articles, [NEW](#) Links
DNA repair patch-mediated double strand DNA break formation in human cells.
J Biol Chem. 2000 Sep 1;275(35):27386-92.
PMID: 10827190 [PubMed - indexed for MEDLINE]
- ☐ **32:** Bliss TM, Lane DP. Related Articles, [NEW](#) Links
Ku selectively transfers between DNA molecules with homologous ends.
J Biol Chem. 1997 Feb 28;272(9):5765-73.
PMID: 9038190 [PubMed - indexed for MEDLINE]
- ☐ **33:** Nagasawa M, Watanabe F, Suwa A, Yamamoto K, Tsukada K, Teraoka H. Related Articles, [NEW](#) Links
Nuclear translocation of the catalytic component of DNA-dependent protein kinase upon growth stimulation in normal human T lymphocytes.
Cell Struct Funct. 1997 Dec;22(6):585-94.
PMID: 9591050 [PubMed - indexed for MEDLINE]
- ☐ **34:** Huang J, Dynan WS. Related Articles, [NEW](#) Links
Reconstitution of the mammalian DNA double-strand break end-joining reaction reveals a requirement for an Mre11/Rad50/NBS1-containing fraction.
Nucleic Acids Res. 2002 Feb 1;30(3):667-74.
PMID: 11809878 [PubMed - indexed for MEDLINE]
- ☐ **35:** Singleton BK, Torres-Arzayus MI, Rottinghaus ST, Taccioli GE, Jeggo PA. Related Articles, [NEW](#) Links
The C terminus of Ku80 activates the DNA-dependent protein kinase catalytic subunit.
Mol Cell Biol. 1999 May;19(5):3267-77.
PMID: 10207052 [PubMed - indexed for MEDLINE]
- ☐ **36:** Featherstone C, Jackson SP. Related Articles, [NEW](#) Links
Ku, a DNA repair protein with multiple cellular functions?
Mutat Res. 1999 May 14;434(1):3-15. Review.
PMID: 10377944 [PubMed - indexed for MEDLINE]
- ☐ **37:** Mahajan KN, Nick McElhinny SA, Mitchell BS, Ramsden DA. Related Articles, [NEW](#) Links
Association of DNA polymerase mu (pol mu) with Ku and ligase IV: role for pol mu in end-joining double-strand break repair.
Mol Cell Biol. 2002 Jul;22(14):5194-202.
PMID: 12077346 [PubMed - indexed for MEDLINE]
- ☐ **38:** Ma Y, Lieber MR. Related Articles, [NEW](#) Links
Binding of inositol hexakisphosphate (IP6) to Ku but not to DNA-PKcs.
J Biol Chem. 2002 Mar 29;277(13):10756-9.
PMID: 11821378 [PubMed - indexed for MEDLINE]
- ☐ **39:** Turchi JJ, Henkels KM, Zhou Y. Related Articles, [NEW](#) Links
Cisplatin-DNA adducts inhibit translocation of the Ku subunits of DNA-PK.
Nucleic Acids Res. 2000 Dec 1;28(23):4634-41.

☐ 40; [Chiu CF](#), [Lin TY](#), [Chou WG](#).

[Related Articles](#), [NEW](#) [Links](#)

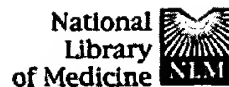
Direct transfer of Ku between DNA molecules with nonhomologous ends.

Mutat Res. 2001 Aug 9;486(3):185-94.

PMID: 11459631 [PubMed - indexed for MEDLINE]

Display	Summary ▼	Sort ▼	Save	Text	Clip Add	Order
Show:	20 ▼	Items 21-40 of 101	Page 2 of 6		Select page: 1 2 3 4 5 6	

[Write to the Help Desk](#)
[NCBI](#) | [NLM](#) | [NIH](#)
[Department of Health & Human Services](#)
[Freedom of Information Act](#) | [Disclaimer](#)

[PubMed](#)[Nucleotide](#)[Protein](#)[Genome](#)[Structure](#)[PopSet](#)[Taxonomy](#)[OMIM](#)[Books](#)

Search

PubMed

for

Go

Clear

[Limits](#)[Preview/Index](#)[History](#)[Clipboard](#)[Details](#)[About Entrez](#)

Display

Summary

Sort

Save

Text

Clip Add

Order

Text Version

Show: 20

Items 41-60 of 101

Page 3 of 6

Select page: 1 2 3 4 5 6

Entrez PubMed

[Overview](#)[Help | FAQ](#)[Tutorial](#)[New/Noteworthy](#)[E-Utilities](#)

PubMed Services

[Journal Browser](#)[MeSH Browser](#)[Single Citation Matcher](#)[Batch Citation Matcher](#)[Clinical Queries](#)[LinkOut](#)[Cubby](#)

Related Resources

[Order Documents](#)[NLM Gateway](#)[TOXNET](#)[Consumer Health](#)[Clinical Alerts](#)[ClinicalTrials.gov](#)[PubMed Central](#)[Privacy Policy](#)☐ 41: [Chan DW, Ye R, Veillette CJ, Lees-Miller SP.](#)[Related Articles](#), [NEW](#) [Links](#)

DNA-dependent protein kinase phosphorylation sites in Ku 70/80 heterodimer.

Biochemistry. 1999 Feb 9;38(6):1819-28.

PMID: 10026262 [PubMed - indexed for MEDLINE]

☐ 42: [Vemuri MC, Schiller E, Naegele JR.](#)[Related Articles](#), [NEW](#) [Links](#)

Elevated DNA double strand breaks and apoptosis in the CNS of scid mutant mice.

Cell Death Differ. 2001 Mar;8(3):245-255.

PMID: 11319607 [PubMed - as supplied by publisher]

☐ 43: [Hammarsten O, DeFazio LG, Chu G.](#)[Related Articles](#), [NEW](#) [Links](#)

Activation of DNA-dependent protein kinase by single-stranded DNA ends.

J Biol Chem. 2000 Jan 21;275(3):1541-50.

PMID: 10636842 [PubMed - indexed for MEDLINE]

☐ 44: [Galande S, Kohwi-Shigematsu T.](#)[Related Articles](#), [NEW](#) [Links](#)

Poly(ADP-ribose) polymerase and Ku autoantigen form a complex and

synergistically bind to matrix attachment sequences.

J Biol Chem. 1999 Jul 16;274(29):20521-8.

PMID: 10400681 [PubMed - indexed for MEDLINE]

☐ 45: [Jin S, Kharbanda S, Mayer B, Kufe D, Weaver DT.](#)[Related Articles](#), [NEW](#) [Links](#)

Binding of Ku and c-Abl at the kinase homology region of DNA-dependent protein kinase catalytic subunit.

J Biol Chem. 1997 Oct 3;272(40):24763-6.

PMID: 9312071 [PubMed - indexed for MEDLINE]

☐ 46: [DeFazio LG, Stansel RM, Griffith JD, Chu G.](#)[Related Articles](#), [NEW](#) [Links](#)

Synopsis of DNA ends by DNA-dependent protein kinase.

EMBO J. 2002 Jun 17;21(12):3192-200.

PMID: 12065431 [PubMed - indexed for MEDLINE]

☐ 47: [Dyran WS, Yoo S.](#)[Related Articles](#), [NEW](#) [Links](#)

Interaction of Ku protein and DNA-dependent protein kinase catalytic subunit with nucleic acids.

Nucleic Acids Res. 1998 Apr 1;26(7):1551-9. Review.

PMID: 9512523 [PubMed - indexed for MEDLINE]

☐ 48: [Ogino H, Fujii M, Satou W, Suzuki T, Michishita E, Ayusawa D.](#)[Related Articles](#), [NEW](#) [Links](#)

Binding of 5-bromouracil-containing S/MAR DNA to the nuclear matrix.

DNA Res. 2002 Feb 28;9(1):25-9.

PMID: 11939566 [PubMed - in process]

☐ 49: [Bianchi A, de Lange T.](#)[Related Articles](#), [NEW](#) [Links](#)

Ku binds telomeric DNA in vitro.

J Biol Chem. 1999 Jul 23;274(30):21223-7.

- ☐ **50:** Yavuzer U, Smith GC, Bliss T, Werner D, Jackson SP. Related Articles, [NEW](#) Links
DNA end-independent activation of DNA-PK mediated via association with the DNA-binding protein C1D.
Genes Dev. 1998 Jul 15;12(14):2188-99.
PMID: 9679063 [PubMed - indexed for MEDLINE]
- ☐ **51:** Peterson SR, Stackhouse M, Waltman MJ, Chen F, Sato K, Chen DJ. Related Articles, [NEW](#) Links
Characterization of two DNA double-stranded break repair-deficient cell lines that express inactive DNA-dependent protein kinase catalytic subunits.
J Biol Chem. 1997 Apr 11;272(15):10227-31.
PMID: 9092571 [PubMed - indexed for MEDLINE]
- ☐ **52:** Ruiz MT, Nichols A, Price GB, Zannis-Hadjopoulos M. Related Articles, [NEW](#) Links
DNA-PKcs-OBA/Ku associate in the absence of DNA, as revealed by two-dimensional capillary gel electromobility shift assay.
Electrophoresis. 2002 Aug;23(15):2485-9.
PMID: 12210207 [PubMed - in process]
- ☐ **53:** Grawunder U, Zimmer D, Lieber MR. Related Articles, [NEW](#) Links
DNA ligase IV binds to XRCC4 via a motif located between rather than within its BRCT domains.
Curr Biol. 1998 Jul 16;8(15):873-6.
PMID: 9705934 [PubMed - indexed for MEDLINE]
- ☐ **54:** Hanakahi LA, Bartlett-Jones M, Chappell C, Pappin D, West SC. Related Articles, [NEW](#) Links
Binding of inositol phosphate to DNA-PK and stimulation of double-strand break repair.
Cell. 2000 Sep 15;102(6):721-9.
PMID: 11030616 [PubMed - indexed for MEDLINE]
- ☐ **55:** Coffey G, Lakshmipathy U, Campbell C. Related Articles, [NEW](#) Links
Mammalian mitochondrial extracts possess DNA end-binding activity.
Nucleic Acids Res. 1999 Aug 15;27(16):3348-54.
PMID: 10454643 [PubMed - indexed for MEDLINE]
- ☐ **56:** Ramsden DA, Gellert M. Related Articles, [NEW](#) Links
Ku protein stimulates DNA end joining by mammalian DNA ligases: a direct role for Ku in repair of DNA double-strand breaks.
EMBO J. 1998 Jan 15;17(2):609-14.
PMID: 9430651 [PubMed - indexed for MEDLINE]
- ☐ **57:** Hanakahi LA, West SC. Related Articles, [NEW](#) Links
Specific interaction of IP6 with human Ku70/80, the DNA-binding subunit of DNA-PK.
EMBO J. 2002 Apr 15;21(8):2038-44.
PMID: 11953323 [PubMed - indexed for MEDLINE]
- ☐ **58:** Leuther KK, Hammarsten O, Komberg RD, Chu G. Related Articles, [NEW](#) Links
Structure of DNA-dependent protein kinase: implications for its regulation by DNA.
EMBO J. 1999 Mar 1;18(5):1114-23.
PMID: 10064579 [PubMed - indexed for MEDLINE]
- ☐ **59:** Wu X, Lieber MR. Related Articles, [NEW](#) Links
Interaction between DNA-dependent protein kinase and a novel protein, KIP.
Mutat Res. 1997 Oct;385(1):13-20.

- ☐ 60: [Suwa A, Hirakata M, Takeda Y, Okano Y, Mimori T, Inada S, Watanabe F, Teraoka H, Dynan WS, Hardin JA.](#)

[Related Articles](#), [NEW](#) [Links](#)

Autoantibodies to DNA-dependent protein kinase. Probes for the catalytic subunit.

J Clin Invest. 1996 Mar 15;97(6):1417-21.

PMID: 8617873 [PubMed - indexed for MEDLINE]

Display	Summary	Sort	Save	Text	Clip Add	Order
Show: 20	Items 41-60 of 101		Page 3 of 6		Select page: 1 2 3 4 5 6	

[Write to the Help Desk](#)
[NCBI](#) | [NLM](#) | [NIH](#)
[Department of Health & Human Services](#)
[Freedom of Information Act](#) | [Disclaimer](#)



PubMed

Nucleotide

Protein

Genome

Structure

PopSet

Taxonomy

OMIM

Books

Search

PubMed

for

Go

Clear

Limits

Preview/Index

History

Clipboard

Details

About Entrez

Display

Summary

Sort

Save

Text

Clip Add

Order

Text Version

Show:

20

Items 61-80 of 101

Page 4 of 6

Select page: 1 2 3 4 5 6

Entrez PubMed

Overview

Help | FAQ

Tutorial

New/Noteworthy

E-Utilities

PubMed Services

Journal Browser

MeSH Browser

Single Citation Matcher

Batch Citation Matcher

Clinical Queries

LinkOut

Cubby

Related Resources

Order Documents

NLM Gateway

TOXNET

Consumer Health

Clinical Alerts

ClinicalTrials.gov

PubMed Central

Privacy Policy

☐ **61:** Mimori T, Hardin JA.Related Articles, [NEW](#) Links

Mechanism of interaction between Ku protein and DNA.

J Biol Chem. 1986 Aug 5;261(22):10375-9.

PMID: 3015926 [PubMed - indexed for MEDLINE]

☐ **62:** Giffin W, Torrance H, Rodda DJ, Prefontaine GG, Pope L, Hache RJ.Related Articles, [NEW](#) Links

Sequence-specific DNA binding by Ku autoantigen and its effects on transcription.

Nature. 1996 Mar 21;380(6571):265-8.

PMID: 8637578 [PubMed - indexed for MEDLINE]

☐ **63:** Wang H, Zeng ZC, Perrault AR, Cheng X, Qin W, Iliakis G.Related Articles, [NEW](#) Links

Genetic evidence for the involvement of DNA ligase IV in the DNA-PK-dependent pathway of non-homologous end joining in mammalian cells.

Nucleic Acids Res. 2001 Apr 15;29(8):1653-60.

PMID: 11292837 [PubMed - indexed for MEDLINE]

☐ **64:** Blunt T, Gell D, Fox M, Taccioli GE, Lehmann AR, Jackson SP, Jeggo PA.Related Articles, [NEW](#) Links

Identification of a nonsense mutation in the carboxyl-terminal region of DNA-dependent protein kinase catalytic subunit in the scid mouse.

Proc Natl Acad Sci U S A. 1996 Sep 17;93(19):10285-90.

PMID: 8816792 [PubMed - indexed for MEDLINE]

☐ **65:** Frasca D, Barattini P, Tocchi G, Guidi L, Pierelli L, Doria G.Related Articles, [NEW](#) Links

Role of DNA-dependent protein kinase in recognition of radiation-induced DNA damage in human peripheral blood mononuclear cells.

Int Immunol. 2001 Jun;13(6):791-7.

PMID: 11369707 [PubMed - indexed for MEDLINE]

☐ **66:** Smider V, Chu G.Related Articles, [NEW](#) Links

The end-joining reaction in V(D)J recombination.

Semin Immunol. 1997 Jun;9(3):189-97. Review.

PMID: 9200330 [PubMed - indexed for MEDLINE]

☐ **67:** Muller C, Rodrigo G, Calsou P, Salles B.Related Articles, [NEW](#) Links

[DNA-dependent protein kinase: a major protein involved in the cellular response to ionizing radiation]

Bull Cancer. 1999 Dec;86(12):977-83. Review. French.

PMID: 10660692 [PubMed - indexed for MEDLINE]

☐ **68:** Johnson AP, Fairman MP.Related Articles, [NEW](#) Links

The identification and characterization of mammalian proteins involved in the rejoining of DNA double-strand breaks in vitro.

Mutat Res. 1996 Oct 18;364(2):103-16.

PMID: 8879276 [PubMed - indexed for MEDLINE]

- ☐ **69:** Jeggo P, Singleton B, Beamish H, Priestley A. Related Articles, [NEW](#) Links
 Double strand break rejoining by the Ku-dependent mechanism of non-homologous end-joining.
 C R Acad Sci III. 1999 Feb-Mar;322(2-3):109-12.
 PMID: 10196660 [PubMed - indexed for MEDLINE]
- ☐ **70:** Modesti M, Hesse JE, Gellert M. Related Articles, [NEW](#) Links
 DNA binding of Xrcc4 protein is associated with V(D)J recombination but not with stimulation of DNA ligase IV activity.
 EMBO J. 1999 Apr 1;18(7):2008-18.
 PMID: 10202163 [PubMed - indexed for MEDLINE]
- ☐ **71:** Liang F, Jasin M. Related Articles, [NEW](#) Links
 Ku80-deficient cells exhibit excess degradation of extrachromosomal DNA.
 J Biol Chem. 1996 Jun 14;271(24):14405-11.
 PMID: 8662903 [PubMed - indexed for MEDLINE]
- ☐ **72:** Calsou P, Muller C, Frit P, Salles B. Related Articles, [NEW](#) Links
 Ku protein complex is involved in nucleotide excision repair of DNA.
 C R Acad Sci III. 1996 Mar;319(3):179-82.
 PMID: 8761663 [PubMed - indexed for MEDLINE]
- ☐ **73:** Taghva A, Ma Y, Lieber MR. Related Articles, [NEW](#) Links
 Analysis of the kinetic and equilibrium binding of Ku protein to DNA.
 J Theor Biol. 2002 Jan 7;214(1):85-97.
 PMID: 11786034 [PubMed - indexed for MEDLINE]
- ☐ **74:** Paillard S, Strauss F. Related Articles, [NEW](#) Links
 Analysis of the mechanism of interaction of simian Ku protein with DNA.
 Nucleic Acids Res. 1991 Oct 25;19(20):5619-24.
 PMID: 1945839 [PubMed - indexed for MEDLINE]
- ☐ **75:** Muller C, Monferran S, Gamp AC, Calsou P, Salles B. Related Articles, [NEW](#) Links
 Inhibition of Ku heterodimer DNA end binding activity during granulocytic differentiation of human promyelocytic cell lines.
 Oncogene. 2001 Jul 19;20(32):4373-82.
 PMID: 11466618 [PubMed - indexed for MEDLINE]
- ☐ **76:** Hakes DJ, Berezney R. Related Articles, [NEW](#) Links
 DNA binding properties of the nuclear matrix and individual nuclear matrix proteins. Evidence for salt-resistant DNA binding sites.
 J Biol Chem. 1991 Jun 15;266(17):11131-40.
 PMID: 2040622 [PubMed - indexed for MEDLINE]
- ☐ **77:** Gell D, Jackson SP. Related Articles, [NEW](#) Links
 Mapping of protein-protein interactions within the DNA-dependent protein kinase complex.
 Nucleic Acids Res. 1999 Sep 1;27(17):3494-502.
 PMID: 10446239 [PubMed - indexed for MEDLINE]
- ☐ **78:** Woodard RL, Anderson MG, Dynan WS. Related Articles, [NEW](#) Links
 Nuclear extracts lacking DNA-dependent protein kinase are deficient in multiple round transcription.
 J Biol Chem. 1999 Jan 1;274(1):478-85.
 PMID: 9867868 [PubMed - indexed for MEDLINE]
- ☐ **79:** Tsukamoto Y, Ikeda H. Related Articles, [NEW](#) Links
 Double-strand break repair mediated by DNA end-joining.

☐ **80:** [Giffin W, Gong W, Schild-Poulter C, Hache RJ.](#)

[Related Articles](#), [NEW](#) [Links](#)

Ku antigen-DNA conformation determines the activation of DNA-dependent protein kinase and DNA sequence-directed repression of mouse mammary tumor virus transcription.

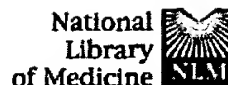
Mol Cell Biol. 1999 Jun;19(6):4065-78.

PMID: 10330147 [PubMed - indexed for MEDLINE]

Display	Summary	▼	Sort	▼	Save	Text	Clip Add	Order
---------	---------	---	------	---	------	------	----------	-------

Show: ▼ Items 61-80 of 101 Page 4 of 6 Select page: [1](#) [2](#) [3](#) [4](#) [5](#) [6](#)

[Write to the Help Desk](#)
[NCBI](#) | [NLM](#) | [NIH](#)
[Department of Health & Human Services](#)
[Freedom of Information Act](#) | [Disclaimer](#)

[PubMed](#)[Nucleotide](#)[Protein](#)[Genome](#)[Structure](#)[PopSet](#)[Taxonomy](#)[OMIM](#)[Books](#)

Search

PubMed ▼

for

Go

Clear

[Limits](#)[Preview/Index](#)[History](#)[Clipboard](#)[Details](#)[About Entrez](#)

Display

Summary ▼

Sort ▼

Save

Text

Clip Add

Order

Text Version

Show:

20 ▼

Items 101-101 of 101

Page 6 of 6

Select page: 1 2 3 4 5 6

Entrez PubMed

[Overview](#)[Help | FAQ](#)[Tutorial](#)[New/Noteworthy](#)[E-Utilities](#)☐ **101:** [West RB](#), [Yaneva M](#), [Lieber MR](#).[Related Articles](#), [NEW](#) [Links](#)

Productive and nonproductive complexes of Ku and DNA-dependent protein kinase at DNA termini.

Mol Cell Biol. 1998 Oct;18(10):5908-20.

PMID: 9742108 [PubMed - indexed for MEDLINE]

PubMed Services

[Journal Browser](#)[MeSH Browser](#)[Single Citation Matcher](#)[Batch Citation Matcher](#)[Clinical Queries](#)[LinkOut](#)[Cubby](#)

Related Resources

[Order Documents](#)[NLM Gateway](#)[TOXNET](#)[Consumer Health](#)[Clinical Alerts](#)[ClinicalTrials.gov](#)[PubMed Central](#)[Privacy Policy](#)[Write to the Help Desk](#)[NCBI | NLM | NIH](#)[Department of Health & Human Services](#)[Freedom of Information Act | Disclaimer](#)